medical costs of elderly Americans are forecasted using the Future Elderly Model (FEM) – an established dynamic microsimulation model of health of Americans aged over 50. The change in the health and health care costs of obesity due to the introduction and widespread use of statins are estimated by introducing a scenario in which statins have not been discovered, using well-recognized estimates of the health impact of statins. **RESULTS:** Simulations reveal that the life expectancy of 50-year-olds with a healthy BMI (18.5-<25) is 0.92 year longer than it would be in a world without statins. Among the obese population, the life expectancy gains due to statins are of 1.00 year for type 1 obesity (BMI 30-<35), 1.05 year for type 2 obesity (BMI 35-<40) and 1.07 year for type 3 obesity (BMI≥40). These life expectancy gains augment the present value of per capita lifetime health care costs by $15,000 for individuals with a healthy BMI, $18,000 for type 1 obesity, $19,100 for type 2 obesity and $19,800 for type 3 obesity. About 33% of these costs are shouldered by the Medicare program. **CONCLUSIONS:** While the widespread use of statins is beneficial for individuals of all weight types, its health impact is highest among the obese population. Additional health care costs from statin use are small relative to the value of life expectancy gains, and mostly paid for by individuals.

PCV52

HEALTH CARE COSTS AND RESOURCE UTILIZATION IN WORKING AGE PATIENTS WITH HIGH RISK VASCULAR DISEASE: FINDINGS FROM A MULTI-EMPLOYER CLAIMS DATABASE

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OBJECTIVES: To assess the health care costs and resource utilization of patients with high risk vascular disease (HRVD). **METHODS:** A retrospective cohort study was conducted using a large employer-based U.S. administrative claims database. This study included patients aged 18 to 64 years who had HRVD (defined as cerebrovascular disease [CVD], coronary artery disease with diabetes [CADD], peripheral artery disease [PAD], or history of acute coronary syndrome [ACS] [>=30days through 365 days after discharge for ACS]) between 10/01/2008 and 09/30/2009, with minimum 12-month pre-index and 24-month post-index insurance eligibility. Annual health care costs and resource utilization were compared across HRVD patients with 1, 2, or 3 affected arterial beds for the first and second year follow-up periods. The comparison of mean costs between cohorts was conducted using a generalized linear model with log link function and gamma distribution. **RESULTS:** Of 152,290 patients who met the selection criteria, 54.4% were male with mean age 54.5(SD=7.5). Among the identified HRVD patients, during the first/second year, 6.8%/4.3% had ≥ 1 hospitalization event and 27.2%/21.5% had ≥ 1 ER visit. The mean annual number of physician office visits was 22/18 for the first and second year respectively. Mean total annual health care costs per HRVD patient for the first and second year were $19,003/$18,547, of which outpatient costs were $9,698/$8,530, inpatient costs were $6,286/$6,220, and pharmacy costs were $3,018/$3,797. HRVD-related costs during the first ($8,699) and second year ($7,925) accounted for close to half of the overall total health care costs. Mean total annual costs in the first and second year were $17,820/$17,501, $28,060/$26,554, and $39,306/$36,513 for patients with 1, 2, and 3 affected arterial beds (P<0.001). **CONCLUSIONS:** These results show the high economic burden of HRVD and the especially high economic burden associated with HRVD patients with multiple affected arterial beds.

PCV53

HEALTH CARE COSTS AND RESOURCE UTILIZATION IN ELDERLY PATIENTS WITH HIGH RISK VASCULAR DISEASE

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OBJECTIVES: To assess the health care costs and resource utilization of elderly patients with high risk vascular disease (HRVD). **METHODS:** A retrospective cohort study was conducted using the Truven MarketScan Medicare claims database to identify patients >=65 years, who had HRVD (defined as cerebrovascular disease [CVD], coronary artery disease with diabetes [CADD], peripheral artery disease [PAD], or history of acute coronary syndrome [ACS] [>=30days through 365 days after discharge for ACS]) between 10/01/2008 and 09/30/2009, with minimum 12-month pre-index and 24-month post-index insurance eligibility. Annual health care costs and resource utilization were compared across HRVD patients with 1, 2, or 3 affected arterial beds for the first- and second-year follow-up periods. The comparison of mean costs between cohorts was conducted using a generalized linear model with log link function and gamma distribution. **RESULTS:** The cohort included 203,949 patients with a mean age of 77.0 years; 52.8% were male. Among the identified HRVD patients during the first/second year, 7.3%/6.3% had ≥ 1 hospitalization event and 27.0%/23.2% had ≥ 1 ER visit. The mean annual number of physician office visits was 26/20 for the first and second year respectively. Mean total annual health care costs per HRVD patient for the first and second year were $17,899/$17,552, of which outpatient costs were $8,911/$6,861, inpatient costs were $5,296/$6,167, and pharmacy costs were $3,692/$4,525. HRVD-related costs during the first ($7,528) and second year ($7,565) accounted for more than 40% of the overall total health care costs. Mean total annual costs in the first and second year were $16,794/$16,631, $22,116/$21,096, and $26,575/$24,556 for patients with 1, 2, and 3 affected arterial beds (P<0.001). **CONCLUSIONS:** These results show the high economic burden of HRVD and the especially high economic burden associated with elderly HRVD patients with multiple affected arterial beds.

PCV54

EVALUATION OF THE BURDEN OF GENERAL CARDIOVASCULAR DISEASE AMONG UNITED STATES MEDICARE PATIENTS

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OBJECTIVES: To evaluate the economic burden and health care utilization of general cardiovascular disease (CVD) patients in the U.S. Medicare population. **METHODS:** A retrospective database analysis was conducted using Medicare data (2008-2010). General CVD patients were identified using myocardial infarction (International Classification of Disease, 9th Revision, Clinical Modification [ICD-9-CM] codes 410.xx, 412.xx), unstable angina (411.1x, 411.81, 411.89), ischemic stroke (434.xx, 436.xx, 437.0x, 437.1x, 438.xx, 997.02), transient ischemic attack (435.xx), heart failure (428.xx) and percutaneous coronary intervention (ICD-9 procedure codes 00.66, 36.09). The first diagnosis date was designated as the index date. One-year continuous enrollment pre- and post-index date was required. Charlson Comorbidity Index (CCI) score and comorbid conditions were examined for the baseline period. Prescribed medications were evaluated within 60 days post-diagnosis. Health care utilization and costs were measured for the follow-up period. **RESULTS:** A total of 203,865 patients were identified for study (mean age 78.9 years). CVD patients were more often female (60.7%), Caucasian (86.0%) and resided in the Southern U.S. region. (39.5%). The baseline CCI score was 1.86, and the most frequently diagnosed comorbid conditions were diabetes (32.8%), tumor (31.0%) and chronic obstructive pulmonary disease (25.6%). Furosemide (13.6%) was most often prescribed within 60 days after diagnosis, followed by simvastatin (11.4%) and lisinopril (10.6%). Health care utilization including Medicare carrier (98.3%), Durable Medical Equipment (DME, 43.9%), Home Health Agency (HHA, 25.6%), outpatient visits (80.5%) and inpatient hospital (52.8%), Skilled Nursing Facility (SNF, 17.7%) and hospice admissions (8.4%) and prescription claims (54.4%) were observed for the follow-up period. CVD patients incurred higher Medicare carrier ($5,679), DME ($534), HHA ($1,506), outpatient ($16,455), inpatient ($12,230), SNF ($3,489), hospice ($822), pharmacy ($1,818) and total costs ($42,533). **CONCLUSIONS:** General CVD Medicare patients utilized a high percentage of Medicare carrier, outpatient and inpatient utilizations, and incurred high health care expenses.

PCV55

HEALTH CARE COSTS ASSOCIATED WITH ACUTE CARDIOVASCULAR EVENTS IN A COPD PATIENT POPULATION

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OBJECTIVES: Cardiovascular (CV) disease significantly contributes to morbidity and mortality in chronic obstructive pulmonary disease (COPD) patients; however, the economic burden of acute CV events in this population is still unknown. Our objective was to estimate the direct medical costs associated with the development of acute CV events in patients with COPD. **METHODS:** We identified patients with a COPD diagnosis (ICD-9 491.x, 492.x, 496.x) between 2005-2010 in the IMS LifeLink Health Claims Database. Patients experiencing an incident CV event (MI, ACS, CHF, arrhythmia, or stroke) resulting in an ER visit or inpatient admission (case index) were matched to up to 3 controls on age, region, gender, year of COPD diagnosis, and time between COPD diagnosis and index date. Mean costs (total, inpatient, outpatient, and pharmacy) in the 12 months before and after the case index and control index were compared, with total costs attributable to the incident CV event determined by using a difference in differences regression to adjust for patient comorbidities. **RESULTS:** Among 9,537 case and 26,128 control patients, the average age was 69.1 years and 51% were male. Hypertension, diabetes, and coronary atherosclerosis were the most prevalent comorbidities. Total costs were $27,300 and $15,016 (pre-index), and $51,468 and $15,596 (post-index) for cases and controls, respectively. Regression analysis resulted in an adjusted difference in differences value of $23,601 (p<0.001). As a percentage of total costs, pharmacy and outpatient costs decreased between the pre-index and post-index periods (13% to 8% and 28% to 22%), while inpatient costs increased (59% to 69%); percentages for control patients remained unchanged. **CONCLUSIONS:** The development of acute CV events in COPD patients is associated with a large increase in direct medical costs, predominantly driven by inpatient costs. Interventions aimed at reducing the incidence of acute CV events in this population are needed to mitigate overall cost burden.

PCV56

EVALUATION OF HOSPITAL RESOURCE UTILIZATION ASSOCIATED WITH MAJOR ADVERSE CARDIOVASCULAR EVENTS

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OBJECTIVES: This study evaluated the hospital resource utilization associated with major adverse cardiovascular events (MACE) in the United States (US) from 2000 to 2010, overall and by type of event. Of special interest was the rate of death during MACE-related hospitalizations. **METHODS:** The Healthcare Cost and Utilization Project (HCUP) Nationwide Inpatient Sample (NIS) database was used to estimate the annual rates of MACE-related hospitalization for adults aged at least 18 years per 100,000 adults as well as per 100,000 adult hospitalizations in the US from 2000 to 2010 using NIS sampling weights and yearly US Census population information. Additionally, average MACE-related per-hospitalization costs (standardized to 2013 USD) and length of stay (LOS) estimates were calculated for each year. MACE-related hospitalizations were identified as those with a primary discharge diagnosis of acute myocardial infarction (AMI), stroke, or cardiac arrest. **RESULTS:** Rates of MACE-related hospitalization have steadily decreased over time from 685 to 525 per 100,000 adults and from 4,650 to 3,611 per 100,000 hospitalizations among adults in the US from 2000 to 2010. The percentage of MACE-related hospitalizations resulting in death also decreased from 7.5% in 2000 to 5.3% in 2010. During this period, the AMI-related stays accounted for the largest percentage of MACE-related hospitalizations (51.2%-55.5%), followed by stroke-related (43.9%-48.2%), and cardiac arrest-related (0.5%-0.7%) stays. The mean (standard deviation [SD]) LOS for MACE-related hospitalizations decreased from 5.4 (6.7) days in 2000 to 4.7 (5.5) days in 2010. However, the mean (SD) costs per MACE-related hospitalization increased from $18,389 ($25,244) in 2000 to $28,629 ($35,008) in 2010. **CONCLUSIONS:** Hospitalization and inpatient fatality rates, as well as LOS per hospitalization associated with MACE have decreased, while costs per MACE-related hospitalization have risen in the US between 2000 and 2010. Further research may elucidate the drivers of these directionally opposing trends.